

REMARKS

This is intended as a full and complete response to the Office Action dated January 3, 2007, having a shortened statutory period for response set to expire on April 3, 2007. Please reconsider the claims pending in the application for reasons discussed below.

Information Disclosure Statement

The missing copy of the reference by *Morstyn* (IDS filed 1/04/2004) is a book that was provided with the IDS filed 10/23/2006. Based on entries in PAIR, Applicants believe that the reference by *Morstyn* has been filed and assigned artifact number 10/658,824BA even though due to binding the reference by *Morstyn* cannot be scanned for viewing in the image file wrapper. Applicants are unaware of any specific pages or portion of the reference by *Morstyn* that caused it to be listed. Therefore, the information disclosure statement filed 10/23/2006 complies with 37 C.F.R. § 1.98(a)(2). Accordingly, Applicants request acknowledgement and consideration of the reference by *Morstyn*.

Claim Rejections - 35 U.S.C. § 112

Claims 11-22 stand rejected under 35 U.S.C. § 112, second paragraph. In response, Applicants amended claim 11 to remove the phrases indicated by the Examiner as being unclear or indefinite. Regarding the phrase "substantially homogenous populations of fibroblasts," Applicants traverse the rejection as discussed herein with respect to new claim 24. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

Claims 11-22 stand rejected under 35 U.S.C. § 112, first paragraph. In response, Applicants amended claim 11 to remove the phrase forming the basis of the Examiner's rejection and canceled claims 21 and 22. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of the claims.

Claim Rejections - 35 U.S.C. § 102

Claims 11-14, 19 and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by US 2003/0119107 (*Dang et al.*). In response, Applicants respectfully traverse the rejection.

Claim 11 recites a method that includes "casting the embryoid bodies in a three-dimensional scaffolding material and a cell culture medium, wherein the three-dimensional scaffolding material is a gel; and growing the embryoid bodies embedded in the three-dimensional scaffolding material and in the cell culture medium, thereby inducing differentiation of the embryoid bodies to produce populations of fibroblasts while embedded in the three-dimensional scaffolding material." In contrast, embryonic stem cells as taught in *Dang, et al.* are grown within agarose capsules to form embryoid bodies that emerge from the capsules (paragraph 160). Lack of influence on differentiation of the embryoid bodies formed as described in *Dang, et al.* enables generation of various cell populations other than fibroblasts, such as illustrated by Example 3 in *Dang, et al.* This "normal differentiation" of embryonic stem cells as described in paragraph [0160] makes processes in *Dang, et al.* useful for all the various cell populations depending on, for example, conditions under which the embryonic stem cells are cultured as described in paragraph [0076]. Thus, *Dang, et al.* only teaches one way to grow stem cells to form embryoid bodies and not to subsequent embryoid body differentiation using embryoid body growth while embedded in a three-dimensional scaffolding material to induce differentiation and produce populations of fibroblasts.

Therefore, *Dang, et al.* fails to teach, show or suggest each and every limitation of claim 11. Further, Applicants submit that claim 11 and all claims dependent thereon are not anticipated by *Dang, et al.* and are patentable. Accordingly, Applicants respectfully request withdrawal of the rejection and allowance of claims 11-14, 19 and 20.

New Claims

Applicants submit that new claim 23 is allowable based at least on its dependency to claim 11. Support for claim 23 is provided at least by paragraph [0055] (see, control culture). Therefore, Applicants request allowance of claim 23.

New claim 24 reintroduces the limitation of "substantially homogenous populations of fibroblasts" to independent claim 11 from which claim 24 depends. While no exact percentage is defined for the claimed homogeneity, claim language that includes terms of degree "does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph." M.P.E.P § 2173.05, *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). Similar to "substantially homogenous," it has been determined that one of ordinary skill in the art would know what was meant by "substantially equal." M.P.E.P § 2173.05, *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988). Applicants submit that the Examiner has failed to establish that one of ordinary skill in the art would not be apprised of the scope of the claim as Applicants continue to assert. Therefore, Applicants respectfully request allowance of claim 24.

Claim Rejections - 35 U.S.C. § 103

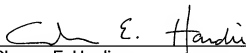
Claims 11-19 as amended and new claims 20-22 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0119107 (*Dang et al.*) taken with *Dani et al.* ["Differentiation of embryonic stem cells into adipocytes in vitro". *Journal of Cell Science* (1997), 110: 1279-1285] and US 6,576,464 (*Gold et al.*). In response, Applicants respectfully traverse the rejection.

As stated above regarding the § 102 rejection, *Dang, et al.* does not teach, show or suggest "casting the embryoid bodies in a three-dimensional scaffolding material and a cell culture medium, wherein the three-dimensional scaffolding material is a gel; and growing the embryoid bodies embedded in the three-dimensional scaffolding material and in the cell culture medium, thereby inducing differentiation of the embryoid bodies to produce populations of fibroblasts while embedded in the three-dimensional scaffolding material," as recited in claim 11. Further, *Dani, et al.* and *Gold, et al.* fail to overcome this deficiency in *Dang, et al.* Therefore, *Dang, et al.* in view of *Dani, et al.* and *Gold, et al.* cannot render claim 11 obvious. Applicants submit that claim 11 and claims 12-19 dependent thereon are allowable and request withdrawal of the rejection and allowance of these claims.

Conclusion

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "C. E. Hardie", is written over a horizontal line.

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